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Young and connected: Psychological influences of mobile phone use amongst Australian youth.

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Mrs Shari Walsh is a PhD scholar in the School of Psychology and Counselling at the Queensland University of Technology. Her PhD research examines the psychosocial factors differentiating appropriate and inappropriate mobile phone use. Shari has a Bachelor of Psychology (Honours). Her Honours’ Thesis investigated the psychological underpinnings of mobile phone behaviour. Findings from Shari’s honours work have been published in Youth Studies Australia and accepted for publication in the Journal of Applied Social Psychology. Shari’s research interests include mobile phone use, self and social identity, and the social development of youth.

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Abstract

Two studies investigating psychosocial factors influencing mobile phone use amongst Australian youth are reported. In Study 1, focus groups comprising 32 participants, three major benefits of mobile phone use emerged: self, social, and practical. Additionally, symptoms of behavioural addiction were indicated. Study 2, used a uses and gratifications theory framework to investigate factors underlying mobile phone use, in particular, indicators of addiction. Participants (N = 946) completed a questionnaire assessing level of mobile phone use; uses and gratifications relating to use; and three addiction indicators, withdrawal, loss of control and salience. Three mobile phone gratifications, self, social, and security, were revealed. Social and self gratification predicted level of use and addictive tendency, with self gratification exhibiting the greatest impact on the three addiction indicators. Results of the two studies assist in understanding young people’s use of mobile phones, providing a foundation for future research in mobile phone addiction.

Keywords – mobile phone, uses and gratifications, addiction, Australia, youth.
Young and Connected: Psychological Influences of Mobile Phone Use amongst Australian Youth

Over 93% of Australian youth, aged 15 to 24 years, own a mobile phone (Galaxy Research, 2004). Some users engage in low level or minimal use, whilst others engage in high level or excessive use (Bianchi & Phillips, 2005; Walsh & White, 2006). Additionally, problematic use including texting when driving (Pennay, 2006), inappropriate use, such as in cinemas and lectures (Walsh & White, 2006) and debt arising from excessive use (Griffiths & Renwick, 2003) have been reported. In recent literature examining mobile phone use, an emerging theme has been that of mobile phone addiction. For instance, items measuring addiction symptoms were included in a problematic mobile phone use scale (Bianchi & Phillips, 2005) and addictive patterns of consumption have been noted amongst some users (James & Drennan, 2005; Wilska, 2003).

Addictive behaviour is defined as an over-attachment to an object or activity (Orford, 2001). Technological devices which provide positive benefits become an intrinsic part of people’s lifestyles, subsequently increasing the potential for addiction to develop (Shaffer, 1996). Indicators of behavioural addiction include withdrawal (negative physiological or psychological response to not engaging in the behaviour); loss of control (engaging in the behaviour more than intended); and salience (the activity dominating thoughts or behaviour (Brown, 1997). Australian youth have grown up with mobile technology and have incorporated mobile phone use into their daily lives; thus, they are arguably the most likely cohort to be demonstrating symptoms of addictive behaviour.

It should be noted that previous research investigating mobile phone use has generally measured level of use in an effort to gain an understanding of people’s relationships with their phones. However, it has been found that measures of level of use are unreliable with people over or under-estimating their use when compared to their mobile phone accounts (Cohen & Lemish, 2003). Additionally, in attempts to gauge problematic use, it has been argued that excessive use differs from addiction as some people may perform an activity excessively without developing an addiction (Charlton & Danforth, 2004). Negative physiological or psychological outcomes, such as
withdrawal, are indicative of addiction and may develop in people who perform a behaviour at any level, not just excessively (Charlton & Danforth). Given this theoretical distinction, the present research aimed to examine the presence of addictive symptoms as defined by addiction literature, as well as assess general levels of use.

As most previous research examining mobile phone use has been conducted overseas, it is unknown whether findings of overseas research are applicable to Australian youth. This paper reports part of a research program investigating psychosocial influences of young Australians’ mobile phone use. First, focus groups were conducted to gain an understanding of young people’s perceptions of mobile phone use and to identify whether symptoms of addictive behaviour emerged. Second, a large-scale quantitative study applied uses and gratifications theory to investigate which gratifications influenced mobile phone use and symptoms of addictive behaviour.

Study 1

Study 1 was a qualitative study designed to elicit young Australians’ perspectives on the role of mobile phone use in their lives and to identify potential indicators of mobile phone addiction. Most Australian psychological research investigating mobile phone use has comprised quantitative studies (e.g., Bianchi & Phillips, 2005; Walsh & White, 2006). Whilst quantitative studies allow for the identification and prediction of behavioural influences, they are generally developed on the basis of a pre-existing theoretical basis. In contrast, qualitative research produces descriptions of behaviour enabling the development of focussed on-going research questions (Mitchell, 2004). The present study explored young people’s experiences and perspectives on mobile phone use.

Method

Thirty-two participants (13 males, 19 females), aged 16 to 24 years ($M = 19.59$, $SD = 2.37$), were recruited by a snowballing method. Occupations included full-time students, hospitality workers, and business professionals. A focus group discussion guide, comprising a series of focussing statements and open-ended questions, was designed to initiate discussion amongst
participants (Silverman, 2005). Topics included patterns of daily mobile phone use, benefits and problems arising from mobile phone use, and thoughts about being unable to use their mobile phone (e.g., “Thinking of a time when you were unable to use your mobile phone… What were your thoughts/feelings at that time?”). In all, six focus groups, lasting approximately 1 hour each, were conducted until saturation had been reached.

Discussions were audio-recorded and the researcher transcribed each tape prior to the commencement of the next group. During transcription, emerging concepts were noted. Common concepts which arose within groups and across groups guided the subsequent thematic data analysis.

Results

Analysis revealed that the mobile phone provided a number of practical and psychological benefits for users. Overall, social factors emerged as being most strongly related to mobile phone use amongst these participants. The most commonly cited benefit of using a mobile phone was the ability to quickly and easily contact others in spite of geographical distance or time constraints. This concept is demonstrated in the following quote:

I’m a very social person…I love to talk to a lot of people…and I’ll try to expand and try and talk to as many people as I can, and I use the phone to do that. (Male, 20).

Another theme to emerge was that of enjoyment or self-gratification. Some participants reported they used their phone to seek social support when they were feeling depressed or lonely. Additionally, using a mobile phone provided pleasurable distraction during times of boredom or inactivity as follows:

When I’m bored I use my phone a lot and message a coupla different people … it’s kind of entertaining (Female, 17).

The final theme to emerge was that mobile phones were used for practical purposes, such as arranging transport (primarily amongst younger participants) and use in emergencies. Females, in particular, reported using their mobile phone as a security device (particularly when alone at night).
Addiction Symptoms

Symptoms of addictive behaviour emerged when participants were describing their mobile phone use. Participants reported feeling frustrated, angry and concerned at times when they were unable to use their phones, indicating that withdrawal is occurring. The most common symptom of withdrawal reported, however, was feeling ‘lost’.

I’d probably be a little lost simply because I use it so much. (Female, 24)

Additionally, some participants reported they lost track of their mobile phone use, indicating the occurrence of compulsive behaviour. A number of participants reported being surprised at how much they had used their phone when they received their phone bill.

Finally, the addiction symptom of salience was indicated when participants discussed how mobile phone use dominated their thoughts and behaviour. Participants reported that mobile phone use was most salient following times that they had not used it, such as waking up in the morning. The most commonly performed behaviour was checking the mobile phone for missed messages or calls:

Sometimes I check my phone even though I know it’s sitting right in my pocket. I know that nothing, got no messages, but I’ll check my phone. (Female, 17).

Discussion

Study 1 investigated the young Australians’ perspectives in relation to mobile phone use. Three major reasons for use, classified as social, self, and practical gratifications, emerged during the discussions. The mobile phone was used for social purposes, enabling participants to quickly and easily contact friends and wider social networks. Using the mobile phone to relieve boredom and for entertainment indicated fulfilled self gratifications. Finally, the mobile phone was valued for practical purposes such as emergency contact and organising transport.

Symptoms of addiction (i.e., withdrawal, loss of control, and salience) emerged in this study. Participants reported feeling uneasy when unable to use their phone, losing track of their mobile phone use, and that mobile phone use dominated their behaviour. The findings of a number
of distinct reported gratifications of mobile phone use, in addition to the emergence of addiction symptoms, allowed for the development of a theoretical base to inform Study 2, a large scale quantitative analysis of the relationship between the functions served by the mobile phone and resultant patterns and experiences of usage.

**Study 2**

The results in Study 1 provided the foundation of a larger quantitative study. First, as the themes that emerged in Study 1 (self, social and practical gratifications) are similar to previous overseas research using a uses and gratifications theory approach, this perspective was also adopted as the theoretical framework for Study 2. Second, as symptoms of addictive behaviour emerged during participants’ descriptions of their mobile phone use in Study 1, Study 2 investigated explicitly the psychosocial factors impacting on indicators of mobile phone addiction.

**Uses and Gratifications Theory**

Uses and gratifications theory is used widely to understand individuals’ use of media and mass communications, such as newspapers, television, and the internet (see Ruggiero, 2000 for a review). According to uses and gratifications theory, people use technologies which gratify social and psychological needs. Uses and gratifications theory has explained reasons for, and outcomes of, mobile technology use in countries including Hong Kong (Leung & Wei, 2000); Taiwan (Wei & Lo, 2006); and Turkey (Ozcan & Kocak, 2003). Whilst the labels of the constructs vary across studies (a limitation of the theory, see Ruggiero), three major gratifications relate to mobile phone use.

First, the mobile phone facilitates contact between social networks fulfilling social gratifications (Wei & Lo, 2006). Second, mobile phone use fulfils self gratifications by providing a means of entertainment and improving self-esteem and status amongst peers (Ozcan & Kocak, 2003). Finally, the mobile phone is a beneficial tool for organising people’s lives and for remaining contactable at all times (Ozcan & Kocak). To date, uses and gratifications theory has not been applied to mobile phone use in Australia.
Addiction Indicators

In addition to the mobile phone use gratifications identified in Study 1, three indicators of addiction, withdrawal, loss of control, and salience, also emerged. Technological addictions develop over time as people increase their level of use when the benefits of using a technology become apparent. Subsequently, some people will develop an addiction to the device and rely on it to meet expected positive outcomes (Shaffer, 1996). To fully understand addictive behaviour, it is necessary to investigate the expected and actual benefits of the behaviour (Orford, 2001). As stated previously, uses and gratifications theory provides a widely accepted framework for understanding the specific gratifications arising from media use. As such, adopting a uses and gratifications framework will improve our knowledge of the relationship between the gratifications of mobile phone use and the development of addictive tendencies amongst mobile phone users.

Thus, Study 2 aimed to investigate the psychosocial factors relating to mobile phone use and indicators of mobile phone addiction. The first research question explored which uses and gratifications relate to young Australians’ reported levels of mobile phone use. The second research question explored the relationship between mobile phone use gratifications and three indicators of addictive behaviour, withdrawal, loss of control and salience.

Method

Participants

Participants \((N = 946; 59\% \text{ females, } 41\% \text{ males})\) aged 15 to 24 years \((M = 18.27, SD = 2.26)\) were recruited from private and public schools, university campuses, youth organisations, and snowballing methods. Participants included students, tradespeople, and professional workers.

Materials

The study consisted of a survey comprising questions measuring general level of mobile phone use, uses and gratifications items, and items assessing symptoms of addiction. Questions were derived from the results of the Study 1 and also following a review of general and problematic mobile phone use, technological addiction, and uses and gratifications literature.
General mobile phone use.

Four open response items (average number of calls made; calls received; texts sent; and texts received each day) assessed level of mobile phone use (e.g., “How many calls would you make on your mobile phone per day?”).

Uses and gratifications items.

Twenty-four uses and gratifications items covering self, social, and practical gratifications (See Table 1) were developed on the basis of results of the pilot study and from previous research (e.g., Ozcan & Kocak, 2003; Wei & Lo, 2006). Responses were scaled from 1 = strongly disagree to 7 = strongly agree.

Addiction indicators.

Three items measuring withdrawal (“I feel lost without my mobile phone”), compulsion or loss of control (“I find it hard to control my mobile phone use”), and salience (“The first thing I do in the morning is check my mobile phone”), scored from 1 = strongly disagree to 7 = strongly agree, served as addiction indices.

Results

General Mobile Phone Use

Overall, SMS was the most common form of mobile phone use. Participants received an average of 7.38 (SD = 9.30, range 0 – 100) text messages per day and sent an average of 6.9 (SD = 8.29, range 0 – 80) text messages per day. Participants received an average of 3.12 (SD = 3.82, range 0 – 55) calls per day and made an average of 2.52 (SD = 3.20, range 0 – 55) calls per day.

The four items, text messages received; text messages sent; calls received; and calls made; were summed forming a scale reflecting average daily level of use ($\alpha = .80$). Participants used their phone for calls or text messages an average of 4.97 (SD = 5.08) times per day.

Uses and Gratifications of Mobile Phone Use

To determine which gratifications applied to Australian youth, a principal components analysis with varimax rotation was performed on the 24 items designed to assess mobile phone use.
gratifications. Seven items which cross-loaded at higher than .35 (indicating they did not load onto a specific factor) were removed from analysis. As shown in Table 1, the 17 retained items produced a 3 factor solution explaining 57.37 percent of the variance. Items loading on each factor were scaled to create three reliable gratification indices.

The first factor, labelled self gratifications, reflects the use of a mobile phone for enjoyment or pleasure ($M = 3.37, SD = 1.30, \alpha = .88$). Although this factor explains the largest proportion of variance, items in this factor have the lowest mean values indicating that participants are least likely to use their mobile phone for self gratification.

Items in factor 2 reflected social gratifications ($M = 5.40, SD = 1.04, \alpha = .78$) with the highest level of agreement for the reason for use being to contact friends. Two items on this factor cross-load on other factors at higher than .3. The first item, to let others know I care for them, also loads onto factor 1 (.34) and the second item, planning social activities, also loads onto factor 3 (.33).

Factor 3 ($M = 5.93, SD = 0.92, \alpha = .79$) comprises items reflecting the practical use of mobile phone such as arranging transport and letting others know where I am. However, items relating to emergency contact load most highly on this factor. Thus, this factor was labelled security gratifications. Means in this factor indicate that participants agree that a mobile phone is highly beneficial for use as a security tool. Items reflecting emergency use had the highest means of all the uses and gratifications items indicating that, overall, participants consider that the most important benefit of using a mobile phone is remaining contactable for emergency situations.
### Table 1

**Means, Standard Deviations, and Factor Loadings for Uses and Gratifications Items**

<table>
<thead>
<tr>
<th>I use my mobile phone</th>
<th>Mean</th>
<th>SD</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because it makes me feel good</td>
<td>3.22</td>
<td>1.72</td>
<td>.80</td>
<td>.16</td>
<td>-.06</td>
</tr>
<tr>
<td>For fun</td>
<td>3.82</td>
<td>1.78</td>
<td>.79</td>
<td>.25</td>
<td>.01</td>
</tr>
<tr>
<td>For entertainment</td>
<td>3.82</td>
<td>1.77</td>
<td>.77</td>
<td>.19</td>
<td>.02</td>
</tr>
<tr>
<td>To pass time</td>
<td>3.60</td>
<td>1.74</td>
<td>.75</td>
<td>.18</td>
<td>.03</td>
</tr>
<tr>
<td>Because it is cool</td>
<td>2.95</td>
<td>1.70</td>
<td>.74</td>
<td>.02</td>
<td>-.07</td>
</tr>
<tr>
<td>To relax</td>
<td>3.15</td>
<td>1.72</td>
<td>.71</td>
<td>.09</td>
<td>.04</td>
</tr>
<tr>
<td>As a fashion accessory</td>
<td>2.86</td>
<td>1.80</td>
<td>.70</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>To get news and information</td>
<td>3.42</td>
<td>1.83</td>
<td>.60</td>
<td>.12</td>
<td>.05</td>
</tr>
<tr>
<td>To stay in touch with people I don’t see much</td>
<td>5.20</td>
<td>1.57</td>
<td>.18</td>
<td>.77</td>
<td>.09</td>
</tr>
<tr>
<td>To contact my friends</td>
<td>5.92</td>
<td>1.09</td>
<td>.13</td>
<td>.73</td>
<td>.28</td>
</tr>
<tr>
<td>To let others know I care for them</td>
<td>4.74</td>
<td>1.69</td>
<td>.34</td>
<td>.66</td>
<td>.09</td>
</tr>
<tr>
<td>To plan social activities</td>
<td>5.73</td>
<td>1.27</td>
<td>.11</td>
<td>.64</td>
<td>.33</td>
</tr>
<tr>
<td>To stay in touch with my family</td>
<td>5.48</td>
<td>1.48</td>
<td>.05</td>
<td>.57</td>
<td>.25</td>
</tr>
<tr>
<td>To be contactable in case of emergency</td>
<td>6.19</td>
<td>1.08</td>
<td>-.10</td>
<td>.22</td>
<td>.82</td>
</tr>
<tr>
<td>To be able to contact others in an emergency</td>
<td>6.17</td>
<td>1.06</td>
<td>-.09</td>
<td>.29</td>
<td>.76</td>
</tr>
<tr>
<td>To arrange transport</td>
<td>5.72</td>
<td>1.26</td>
<td>.04</td>
<td>.12</td>
<td>.75</td>
</tr>
<tr>
<td>To let others know where I am</td>
<td>5.64</td>
<td>1.29</td>
<td>.14</td>
<td>.22</td>
<td>.68</td>
</tr>
</tbody>
</table>

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigenvalue</td>
<td>4.52</td>
<td>2.66</td>
<td>2.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance explained (%)</td>
<td>26.63</td>
<td>15.64</td>
<td>15.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Items were scaled 1 = strongly disagree to 7 = strongly agree
Three scales were formed reflecting self, social, and security gratifications. Multiple regressions were conducted to examine the role of gratifications on average daily level of mobile phone use. As shown in Table 2, the three gratifications predicted level of use; however, the gratifications explained a small proportion (7%) of variance only. Social gratification emerged as the strongest predictor of use followed by self gratification. Security did not predict level of use.

Table 2
Multiple Regression Analysis predicting Daily Use

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>ΔR²</th>
<th>F</th>
<th>B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily level of use</td>
<td>.27</td>
<td>.07</td>
<td>24.12***</td>
<td>.64</td>
<td>.16***</td>
</tr>
<tr>
<td>Self</td>
<td>.85</td>
<td>.17***</td>
<td>24.12***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>-.23</td>
<td>-.04</td>
<td>24.12***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** p <.001

Level of Use and Addiction Indicators

Correlations between level of use and the three addiction indicators were examined to ensure that level of use and addiction symptoms were distinct concepts. Significant positive correlations ranging from .23 to .27 were found between level of use and withdrawal, loss of control, and salience. Although significant, results indicate a relatively weak relationship between level of use and the three addiction symptoms, suggesting that they reflect different constructs.

Addiction Indicators

The most commonly reported indicator of addiction was withdrawal, or feeling lost when without their phone, \( M = 4.16, SD = 2.00 \). Salience, measured by checking the phone first thing in the morning, was the second most common addiction indicator \( M = 3.57, SD = 1.97 \). Fewer than half of the participants reported that it was hard to control their mobile phone use \( M = 2.61, SD = 1.63 \). As pooling of the three addiction items resulted in a low Cronbach’s alpha (.65), separate analyses were conducted to examine the predictors of each addiction indicator.
Multiple regression analyses were performed testing the role of self, social, and security gratifications on the addiction indicators of withdrawal, salience, and loss of control. As shown in Table 3, the gratifications of mobile phone use significantly accounted for between 18% and 24% of the variance in the addiction indicators. Self gratification emerged as the strongest overall predictor of the addiction indicators, followed by social gratification. Security gratification did not significantly predict addictive tendencies.

Table 3

*Multiple Regression Analyses predicting Addiction Indicators*

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>ΔR²</th>
<th>F</th>
<th>B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawal</td>
<td>.43</td>
<td>.19</td>
<td>71.90***</td>
<td>.46</td>
<td>.30***</td>
</tr>
<tr>
<td>Self</td>
<td></td>
<td></td>
<td></td>
<td>.41</td>
<td>.21***</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salience</td>
<td>.42</td>
<td>.18</td>
<td>66.90***</td>
<td>.48</td>
<td>.32***</td>
</tr>
<tr>
<td>Self</td>
<td></td>
<td></td>
<td></td>
<td>.34</td>
<td>.18***</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td>-.02</td>
<td>-.01</td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of Control</td>
<td>.49</td>
<td>.24</td>
<td>96.75***</td>
<td>.58</td>
<td>.46***</td>
</tr>
<tr>
<td>Self</td>
<td></td>
<td></td>
<td></td>
<td>.09</td>
<td>.06***</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td>-.22</td>
<td>-.12</td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** p < .001

Regression analyses were also conducted controlling for the effect of reported level of use at the first step. A similar pattern of results emerged.

Discussion

Study 2 identified, quantitatively, the uses and gratifications relating to mobile phone use amongst Australian youth. The study also explored the relationship between mobile phone use
gratifications and indicators of addiction. Three gratifications, self, social, and security, were found to underlie mobile phone use. The weak relationship between level of use and three indicators of addiction, withdrawal, salience, and loss of control, indicates that behavioural addiction differs from excessive or high level use. Results of regression analyses revealed that social and self gratification predicted level of use and addictive tendencies, with self gratification emerging as the strongest predictor across the three addiction indicators. Security gratification did not significantly predict level of use or the addiction indictors.

Self gratification related to using the mobile phone for enjoyment or pleasure. Items in this factor included using the mobile phone for fun and to feel good. Self gratification had the lowest mean value of the gratifications scales indicating that participants report they are less likely to use their mobile phone for self gratification compared to social or security gratifications. Two items reflecting use of the mobile phone for self-image had the lowest means amongst all the uses and gratifications items. Thus, in contrast to previous overseas research (e.g., Ozcan & Kocak, 2003), participants in this study did not value the mobile phone as a fashion item or status symbol and were less likely to use their phone as a fashion item than for any other purpose.

Second, similar to previous research (e.g., Wei & Lo, 2006), mobile phones were used to fulfil social gratification with participants using the phone to stay in contact with friends and valued others. The high mean values of social gratification items reveals that mobile phones were valued for this purpose. Two items in this factor, letting others know you care for them and planning social activities, cross-loaded with self and security gratifications respectively. Thus, it appears that people derive enjoyment from contacting others and that using the mobile phone for planning social activities is related to security.

Finally, security gratifications were valued by participants. Being contactable or being able to be contacted in case of emergency had the highest mean values amongst all the uses and gratifications items. Thus, having a mobile phone appears to allow participants to gain a psychological benefit of feeling secure. The inclusion of arranging transport and staying in touch
with my family in this factor suggests that contacting others to inform them of where you are increases the perception of security. However, similar to previous research, security gratifications did not predict level of use (Ozcan & Kocak, 2003) or the addiction indicators.

The three gratifications accounted for a small amount of variance only in young people’s mobile phone use with both social and self gratifications emerging as the significant predictors of mobile phone use. In contrast, gratifications accounted for a moderate proportion of variance in the three addiction indicators (withdrawal, salience, and loss of control) supporting the need to understand how behavioural expectancies influence addictive behaviour (Orford, 2001). Self and social gratifications significantly influenced addiction tendency with self gratification emerging as the strongest predictor of all three addiction indicators. Thus, people who enjoy using their mobile phone are most likely to demonstrate addictive tendencies. Additionally, addictive tendencies may be evidenced amongst people who highly value social contact, reinforcing the social nature of many addictive behaviours (Orford, 2001) and of mobile phone use (Ling, 2004).

Some limitations of Study 2 should be noted. Youth in Australia have grown up with mobile telephones and have incorporated the mobile phone into their daily lives. It may be that factors which are not included in the uses and gratifications framework (such as environmental or contextual influences) reduce the influence of gratifications on overall use. Additionally, it must be noted that a number of original items in the pool (primarily relating to social and security factors) were removed from analysis due to cross-loading and that two items in the final pool loaded onto more than one factor. These measures should be refined in future research.

Uses and gratifications theory has been criticised for producing inconsistent and vague gratifications (Ruggiero, 2000) which describe reasons for people adopting and using a medium rather than allowing for the development of causal explanations for behaviour (McQuail, 2001). As constructs such as self-identity have been associated with high level mobile phone use (see Walsh & White, in press), it may be that specific psychological factors mediate the link between gratifications and mobile phone use.
General Discussion

This research integrated qualitative and quantitative research methods to improve our understanding of the psychological factors relating to mobile phone use amongst Australian youth, a relatively under-researched area. In both studies, three gratifications, self, social, and security, emerged in relation to mobile phone use. Indicators of behavioural addiction, withdrawal, salience, and loss of control, were revealed in both studies. These findings build on previous research signalling the emergence of mobile phone addiction (e.g., Bianchi & Phillips, 2005) by identifying and measuring specific indicators of addiction.

Withdrawal, or feeling lost when without their mobile phone, was the most commonly reported indicator of addiction. Thus, it may be that, in the context of mobile phone use, extreme negative outcomes, such as anxiety or distress, are not prevalent. The addiction indicator, behavioural salience, emerged as the second highest addiction indicator in this study. Whilst it could be argued that behavioural salience indicates excessive, rather than addictive, behaviour, highly salient behaviours are likely to be performed at inappropriate times; to interfere with daily activities; and to lead to reduced work and social performance; symptoms of addiction (Brown, 1997; Orford, 2001). Finally, loss of control over the mobile phone use was reported in both studies revealing that some young mobile phone users experience a compulsion, a component of addictive behaviour (Brown, 1997). It must be noted that the findings in relation to addiction in this study do not suggest that mobile phone addiction is commonly occurring but that such tendencies are indicated. Further research is required to adequately define and measure the symptoms of mobile phone addiction to determine the prevalence and impact of mobile phone addiction amongst Australian youth. It could be that mobile phone addiction is a positive addiction in which the benefits outweigh the negative consequences arising from the behaviour (Glasser, 1985).

The findings in this study have implications for programs designed to discourage inappropriate or problematic use. As it would be expected that people who demonstrate signs of addiction are most likely to engage in inappropriate use (Bianchi & Phillips, 2005), written appeals
to use phones appropriately in schools or when driving may not be sufficient. People with addictive tendencies experience a compulsive drive to engage in the activity irrespective of societal constraint and, as such, it is important to address the psychological factors relating to the behaviour (Orford, 2001). The finding that self gratification was the most impactful predictor suggests that campaigns may need to highlight that appropriate mobile phone use is more important than the personal pleasure gained from using a mobile phone.

Overall, the two studies reported in the present research obtained converging qualitative and quantitative evidence for the uses that the mobile phone serves amongst young Australians. Specifically, self, social and security gratifications emerged as relevant to this cohort. In addition, both studies suggest the presence of mobile phone addiction tendencies, as indicated by symptoms of withdrawal, salience and control, amongst Australian youth. The relationship between the function that mobile phones serve and both the patterns of use and tendency towards addiction was also explored. While both social and self gratifications impacted upon level of use and addictive tendency, it was especially those who derive self gratification from their mobile phone use who are more likely to demonstrate addiction symptoms. The results of these two studies serve to improve our understanding of the underlying factors influencing young people’s mobile phone use and provide insight into the impact of these factors on the tendency towards addictive behaviour amongst young Australians.
References


